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'Providing Tribological Solutions'

TYPES OF PHOSPHATE ESTER CONTROL FLUIDS

BRAND NAME				TYPE	DESIRABLE FEATURES
REOLUBE[1] TURBOFLUIDS		FYRQUELS[2]			
EHC[3]	HYD[3]	EHC[3]	HYD[3]		
Turbofluid 46XC and OMTI	**220X**	**EHC-N (Stauffer EHC[3])**	**220N**	Trixylenyl Phosphate Ester (TXP)	Lowest air release times, best hydrolytic stability and good overall.
Turbofluid 46B (Durad EHB)	**HYD 46B**	**EHC-S EHC Plus[4]**	**220**	Butylated Phenol Phosphate Ester (TBPP)	Best bulk oxidation resistance.
Turbofluid 46	**HYD 46**	**-**	**-**	Isopropyl Phenol Phosphate Ester (IPPP)	Better hydrolytic stability than butylated synthetics.
-	**-**	**EHC[5]**	**-**	Blend of Butylated Phenol and Trixylenyl Phosphate Ester	A compromise of the natural and synthetic.

1. Fluids were originally from both FMC and Ciba-Geigy but then FMC, later Great Lakes Chemical Company and now Chemtura Co.
2. Fyrquel fluids were originally from Stauffer, later Chesborough, Chesborough Ponds, Akzo and Akzo Nobel Chemicals Inc. and then Supresta owned by a holding company but is now owned by ICL (Israel Chemical Ltd.).
3. EHC stands for electrohydraulic control systems that have servo-valves and HYD for control systems not having servo-valves. Typically EHC fluids can be used in HYD systems but the converse is seldom recommended. Also the listed fluids are not necessarily approved for use so check with the turbine manufacturer.
4. Similar chemically but has some different characteristics because of manufacturing.
5. Fyrquel EHC was a 100% TXP until about the mid 80's.

Additional Fluids: Castrol Anvol PE 46 XC is a TXP as appears to be Mobil Pyrogard 53T while Castrol Anvol PE 46 and Mobil Pyrogard 53 are synthetics or blends.